means for mixing said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conference,

wherein said mixing means includes means for providing distance-based attenuation according to sound decay characteristics, and

wherein said mixing means results in mixed audio data; and

means for delivering said mixed audio data to said plurality of audio clients in said at least one audio conference.

7. (AMENDED) The ACS of claim [2] 1, wherein said means for providing distance-based attenuation according to sound decay characteristics comprises:

means for identifying a decay factor from one of a plurality of pre-defined decay factors and a customized decay factor for each of said plurality of audio clients, said plurality of pre-defined decay factors including

an audio big decay factor,

an audio small decay factor,

an audio medium decay factor, and

a constant decay factor;

means for determining distances between a target audio client and a plurality of source audio clients;

means for determining a plurality of weighted values for each of said source audio clients based on said identified decay factor and said distance between each of said source audio clients and said target audio client, wherein each of said weighted values corresponds to a source/target audio client pair;

means for generating a mix table for each of said source/target audio client pairs;

means for calculating an actual mix for said target audio clients; and

means for refining said actual mix for said target audio clients.

9. (AMENDED) A method for enabling an audio conference server (ACS) to provide an application program with multi-point, weight controllable audio conferencing, comprising [the steps of]:

(1) managing at least one audio conference, said at least one audio conference comprising a plurality of audio clients;

(2) receiving audio data from said plurality of audio clients;

(3) mixing said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conference,

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wherein said mixing includes providing distance-based attenuation according to sound decay characteristics, and

wherein said (mixing means) results in mixed audio data; and

(4) delivering said mixed audio data to said plurality of audio clients in said at least one audio conference.

11. (AMENDED) The method of claim 8, further comprising [the step of] checking the status of a registered owner of said at least one audio conference to determine whether said at least one audio conference still exists.

12. (AMENDED) The method of claim 11, wherein said checking [step] includes a resource audit service, said resource audit service operable when said at least one audio conference is generated by a first application and is being used by a second application.

14. (AMENDED) The method of claim 8, wherein [step (1)] said managing comprises [the step of] providing program access to high level methods for creating and managing a proxy audio conference using an ACS shell.

15. (AMENDED) The method of claim 8, wherein [step (1)] said managing comprises [the step of] providing program

access to methods for creating and managing said point source

audio using an ACS shell.

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16. (AMENDED) The method of claim 8, wherein [step

(1)] said managing comprises [the step of] providing program

access to low level methods for creating and managing said at

least one audio conference using an ACS shell.

17. (AMENDED) The method of claim [10] 9, wherein

[said step for] providing distance-based attenuation according to

sound decay characteristics comprises [the steps of]:

identifying a decay factor from one of a plurality of

pre-defined decay factors and a customized decay factor for each

of said plurality of audio clients, said plurality of pre-defined

decay factors including

an audio big decay factor,

an audio small decay factor,

an audio medium decay factor, and

a constant decay factor;

determining distances between a target audio client and

a plurality of source audio clients;

determining a plurality of weighted values for each of

said source audio clients based on said identified decay factor

and said distance between each of said source audio client and

said target audio client, wherein each of said weighted values corresponds to a source/target audio client pair;

generating a mix table for each of said source/target audio client pairs;

calculating an actual mix for said target audio clients using said mix table; and

refining said actual mix for said target audio clients, wherein said refining step is used to avoid transmitting excess energy audio data, avoid the delivery of said audio data in a step-wise manner to a speaker output, avoid the performance of floating point multiplication, adapt the actual mix calculation for said target audio client to available CPU resources, select the nearest talking audio clients for the actual mix, and prepare stream audio for playing ambient background music or using an audio source forwarded from another conference.

18. (AMENDED) A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling an audio conference server (ACS) to provide an application program with multi-point, weight controllable audio conferencing, said computer program logic comprising:

means for enabling the computer to manage at.least one audio conference, said at least one audio conference comprising a plurality of audio clients;

means for enabling the computer to receive audio data
from said plurality of audio clients;

means for enabling the computer to mix said audio data
to provide spatialized audio to said plurality of audio clients
in said at least one audio conferences/

wherein said mixing means includes means for enabling
the computer to provide distance-based attenuation according to
sound decay characteristics, and

wherein said mixing means results in mixed audio data;
and

means for enabling the computer to deliver said mixed
audio data to said plurality of audio clients in said at least
one audio conference.

24.   (AMENDED) The computer program product of claim
[19] 18, wherein said means for enabling the computer to provide
distance-based attenuation according to sound decay
characteristics comprises:

means for enabling the computer to identify a decay
factor from one of a plurality of pre-defined decay factors and a
customized decay factor for each of said plurality of audio
clients, said plurality of pre-defined decay factors including

an audio big decay factor,

an audio small decay factor,

an audio medium decay factor, and

a constant decay factor;

means for enabling the computer to determine distances between a target audio client and a plurality of source audio clients;

means for enabling the computer to determine a plurality of weighted values for each of said source audio clients based on said identified decay factor and said distance between said source audio client and said target audio client, wherein each of said weighted values corresponds to a source/target audio client pair;

means for enabling the computer to generate a mix table for each of said source/target audio client pairs;

means for enabling the computer to calculate an actual mix for said source audio clients; and

means for enabling the computer to refine said actual mix for said source audio clients.

Please add claims 26-44 as follows.

--26. An audio conferencing method comprising:

receiving audio data from a source audio client;

attenuating the received audio data based on audio decay characteristics to simulate a distance between the source audio client and a target audio client; and

delivering the attenuated audio data to the target audio client.

27. The method of claim 26, wherein the target audio client is the same as the source audio client.

28. The method of claim 26, wherein the target audio client is different than the source audio client.

29. The method of claim 28, further comprising delivering the attenuated data to the source audio client.

30. The method of claim 26, wherein the source and target audio clients are displayed as points on a viewing screen from which sound appears to emanate.

31. The method of claim 30, wherein the source audio client comprises a point source audio (PSA) client that originates from stored audio data.

32. The method of claim 31, wherein the PSA includes point sources of sound from a file or user input.

33. The method of claim 30, wherein the source audio client comprises a set-top box (STB) audio client the originates from an audio conferencing user.

34. The method of claim 33, wherein the STB includes a set-top application for controlling audio data from a microphone or speaker.

35. The method of claim 30, wherein the target audio client comprises a set-top box (STB) audio client that originates from an audio conferencing user.

36. The method of claim 35, wherein the STB includes a set-top application for controlling audio data from a microphone or speaker.

37. The method of claim 26, wherein a plurality of audio clients participate in an audio conference.

38. The method of claim 26, further comprising managing one or more audio conferences using an Interface Definition Language (IDL) that creates and deletes conferences, adds and removes participants to and from the conferences, and changes a volume balance among participants in the conferences.

39. The method of claim 26, wherein attenuating comprises identifying a decay factor for each audio client.

40. The method of claim 39, wherein the decay factor is a customized decay factor.

41. The method of claim 39, wherein attenuating further comprises determining a weighted value between the source audio client and the target audio client based on the source audio client's decay factor.

42. The method of claim 41, wherein attenuating further comprises calculating a mix for the audio clients using the weighted values.

43. The method of claim 42, wherein attenuating further comprises refining the mix for the audio clients by adjusting a plurality of audio data functions such as gain control, fade in/fade out, floating point operation elimination, mixing adaption, mixing cut-off, and stream audio.

44. Computer software, stored on a computer-readable medium, for an audio conference server (ACS), the software comprising instructions for causing a computer processor to perform the following operations:

receive audio data from a source audio client;